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COMMITTEE ON ENERGY AND NATURAL RESOURCES
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FULL COMMITTEE HEARING
NATURAL GAS MARKETS: ONE YEAR AFTER THE NATIONAL PETROLEUM COUNCIL'S GAS REPORT

WITNESS NAME AND TITLE

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- **Mr. Roger Cooper**
  Executive Vice President, Policy and Planning - American Gas Association, Washington, D.C.

- **Ms. Deborah Schachter**
  Director, Governor's Office of Energy and Community Services, Concord, N.H. - On behalf of the National Association of State Energy Officials

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Subject: Natural Gas, Forecast

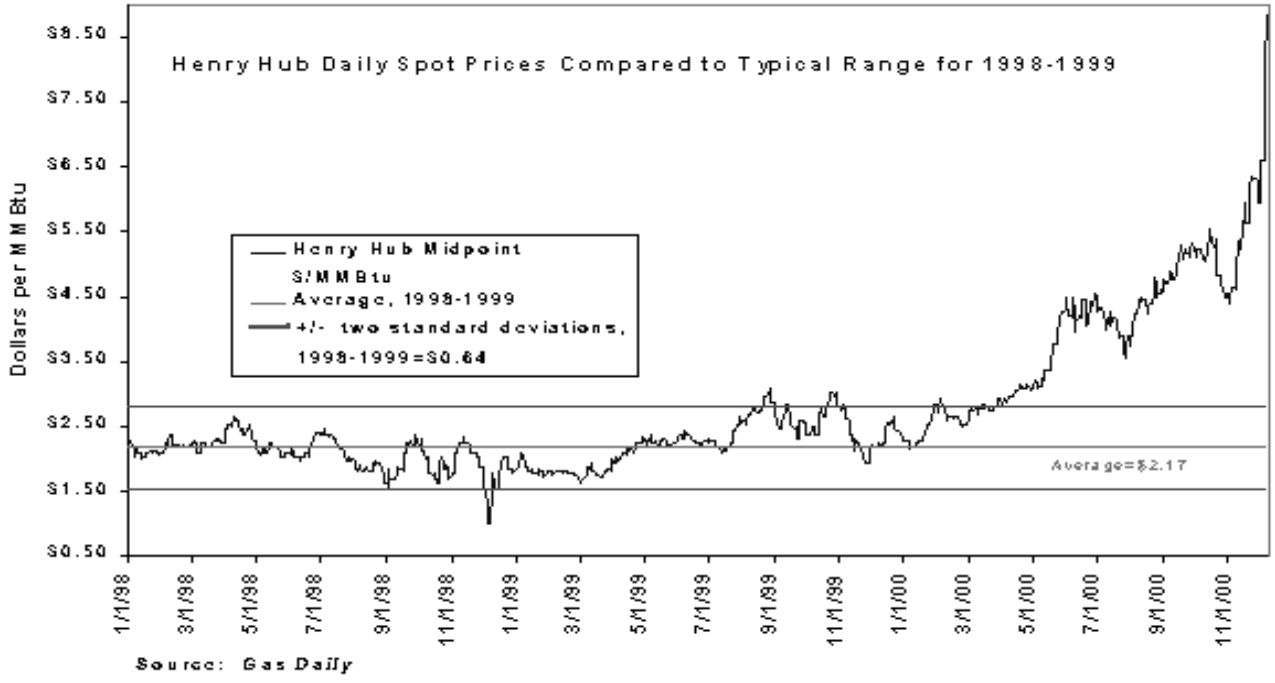
Mr. Chairman and Members of the Committee: I appreciate the opportunity to appear before you today to discuss the views of the Energy Information Administration (EIA) on natural gas supply and demand.

EIA is an independent statistical and analytical agency within the Department of Energy. We are charged with providing objective, timely, and relevant data, analysis, and projections for the use of the Energy Department, other agencies, the Congress, and the public. We do not take positions on policy issues, but we do produce data and analysis reports that are meant to help policymakers decide energy policy. Because we have an element of statutory independence with respect to the analyses that we publish, our views are strictly those of EIA. We do not speak for the Department, nor for any particular point of view with respect to energy policy, and our views should not be construed as representing those of the Department or the Administration.

Today, we will focus on the recent surge in natural gas prices, discussing some of the potential reasons for this rapid price movement. We also will consider what this price increase means for American consumers of natural gas and how we expect markets to respond to this runup in prices.

Since late May 2000, spot wellhead prices generally have been above $4 per MMBtu (million Btu) at the Henry Hub. For most of September through early December, these prices have been above $5 per MMBtu, more than double the price of one year ago, and recently spot prices approached $9 per MMBtu. Spot gas prices for the past 8 months therefore have consistently exceeded the normal range exhibited in 1998 and 1999, which generally was below $3 per MMBtu (Figure 1).

Figure 1. Current Natural Gas Prices: Well Above the Recent Price Range

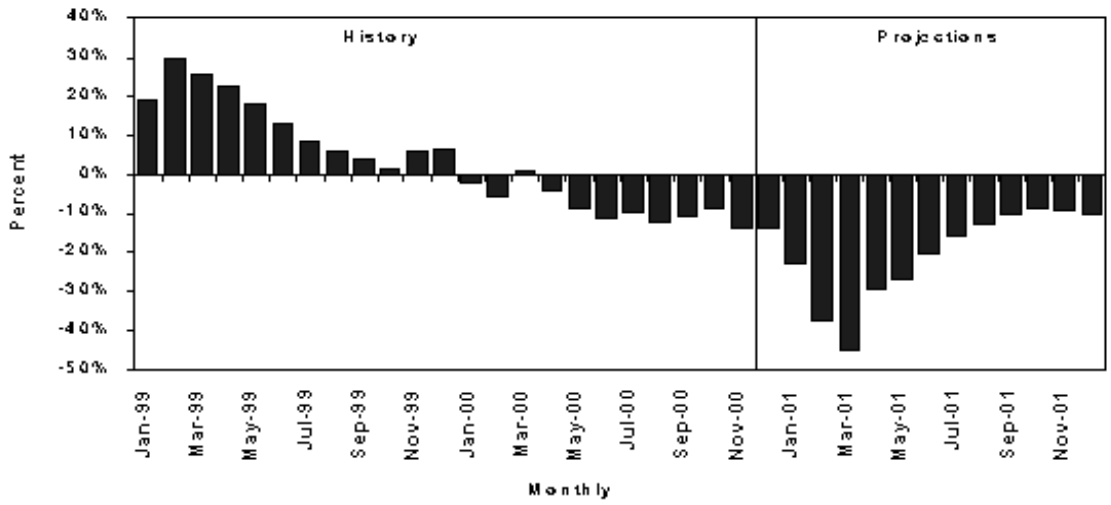


In late November, gas spot prices surged past $6 per MMBtu, reaching $8.86 per MMBtu on December 6, 2000. Although spot prices at certain cash markets have been at comparable levels in the past, the present experience is unusual in that gas prices previously had not remained this high for a sustained period of time.

In addition to higher prices nationally, California has been experiencing particularly high natural gas spot prices (more than four times as high as recent national averages). High demand for gas-fired electricity generation and for heating, coupled with low storage levels and low hydro and nuclear generation output, have severely strained the system in that State. Available supplies of gas from outside the State to meet strong gas demand are limited due to lingering operational difficulties along the El Paso system entering southern California, and the lack of available capacity along pipeline routes from the Canadian border in the State of Washington and from the Rocky Mountain producing areas. The El Paso system is constrained below normal flow levels while it is recovering from the pipeline rupture in August. The limited spare capacity into California elsewhere is because these systems typically have run at high rates of utilization.

Recent surges in natural gas demand underscore the importance of gas in storage as part of the U.S. supply picture. The American Gas Association (AGA) estimated net withdrawals at 73 Bcf for the week ended Friday, December 1. Based on these withdrawals, nationwide natural gas inventories are at an EIA-estimated 2,414 Bcf, which is 394 bcf or 14 percent below EIA's average of 2,808 Bcf for this point during the previous 5 years (1995-1999) (Figure 2).

Figure 2. U.S. Working Gas in Storage
(Percent Difference from Previous 5-year Average)



Sources: History: EIA; Projections: *Short-Term Energy Outlook*, December 2000.

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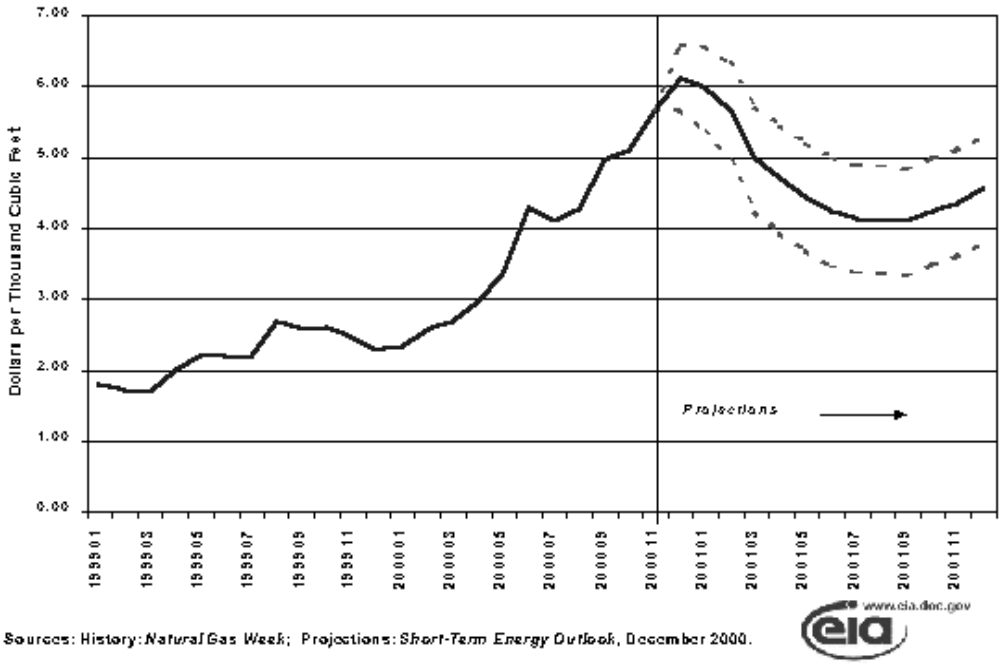
While this withdrawal estimate is half the amount from the previous week, it is nonetheless relatively large for this point in the year. It was driven largely by the heavy gas-consuming East region, where estimated withdrawals were 57 Bcf-the second largest draw for that region in this particular week of the heating season over the past 5 years. As of December 1, East region stocks were 7.3 percent below the 5-year average (1,714 Bcf), while the 254 and 571 Bcf in the West region and the producing region stocks are 31 and 21 percent below normal.

EIA expects that high and volatile gas prices will prevail until significantly more gas supplies enter the market, although the likelihood of that in the near future is not high. Natural gas consumption this winter (October 2000 through March 2001) is expected to be 5.9 percent greater than last winter's level, assuming normal temperatures in the remainder of the season. Normal weather implies an 11 percent rise in gas-weighted heating degree-days compared with last winter, which was much warmer than normal. Under normal weather assumptions, estimated residential and commercial sector consumption would be up by around 10 percent over the same period last year. Natural gas demand in the industrial sector is expected to increase by 7.4 percent in 2000, with gas-fired electricity generation by merchant plants and cogenerators combined expected to be up by 18.6 percent. Electric utility gas demand is expected to remain about level with consumption rates seen in 2000. This distinction is due in part to sales of electric generating plants by electric utilities to unregulated generating companies, fuel consumption that currently is recorded by EIA in the industrial sector.

During the winter months, net imports of natural gas are about 10 percent higher than during the rest of the year and usually increase to full pipeline capacity. While it is unlikely that export capacity will be fully utilized this winter, EIA expects net imports to rise by 7.3 percent over last winter's imports. The Alliance Pipeline began carrying gas from western Canada to the Midwest on December 1. Even if Alliance is near capacity at mid winter, it is highly likely that a substantial portion of the volumes contracted for delivery on the system will have been redirected from other systems, particularly the TransCanada Pipeline System. Thus, the Alliance pipeline may not add significantly to total gas supply from Canada this winter.

Assuming normal weather for the remainder of the heating season, EIA is projecting that natural gas prices at the wellhead this winter (October-March) will average about $5.60 per thousand cubic feet, more than double the price of last winter (Figure 3).

Figure 3. Natural Gas Spot Prices: Base Case and 95% Confidence Interval



Sources: History: *Natural Gas Week*; Projections: *Short-Term Energy Outlook*, December 2000.

Cold weather for prolonged periods this winter would strain supplies and could result in even higher spot prices. Given the recent variability in the natural gas spot market, spot prices of natural gas are likely to hit or breach the upper level of the uncertainty bands of the forecast (shown as dotted lines in Figure 3) if the cold weather in the gas consuming regions of the country turns out to be unexpectedly severe. On the other hand, the market experience in October shows that spot gas prices could still plunge sharply if the weather turns warm for any lengthy period of time in the gas consuming regions. In addition to expected supply and demand conditions this winter, continued increases in natural gas demand from new gas generating plants next year will probably prolong the much-above-normal price environment through 2001, even if further gains in U.S. and Canadian production materializes for 2001, which EIA anticipates.

In 2001, utility gas-fired electricity demand is expected to remain about flat, while industrial gas-fired electricity generation growth continues at 5.1 percent, down from the 7.4 percent expected to be realized in 2000. These reduced growth rates next year represent the net effect of increased growth in gas-fired capacity being offset by the reversal in prices of natural gas relative to oil and a slowing in the growth rate of electricity demand.

Gas supplies available to U.S. markets are expected to expand by 1.3 trillion cubic feet (Tcf) between 2000 and 2001. Domestic gas production for 2000 and 2001 is expected to increase as production begins to respond to the high rates of drilling experienced over the past year, during which the number of rigs drilling gas wells have hit record levels (running in excess of 800 rigs since the end of August 2000, versus a low of 362 in the third week of April 1999). Annual production is projected to rise by 0.7 percent in 2000 but by a significantly higher 3.9 percent rate in 2001. Net imports of natural gas are projected to rise by about 16 percent in 2001, from 3.5 to 4.0 Tcf.

For the entire year 2000, the average wellhead price for natural gas is projected to average $3.60 per thousand cubic feet, an increase of 73 percent from the previous year. Higher end-use prices will result from higher projected wellhead prices. Given the EIA base case projections, residential prices for natural gas this winter would be about 40 percent higher than last year during that period. Expected average winter residential prices averaging about $9.21 per thousand cubic feet, combined with temperature-driven higher consumption rates, would result in an increase in gas-heated household heating bills for the typical consumer of around 50 percent this winter (Figure 4).

Figure 4. Consumer Natural Gas Winter Heating Costs

Average Midwest Household Consumption, U.S. Prices				
	97-98	98-99	99-00	00-01
	Actual	Actual	Actual	Base Fcst
Mcf	82.4	84.5	81.7	90.6
($/Mcf)	$6.56	$6.27	$6.61	$9.21
Cost ($)	$541	$530	$540	$834

Source: Energy Information Administration

Prices in the spring of next year should descend from their winter highs by about $1 per thousand cubic feet as the weather-related demand recedes. EIA expects a continued price decline through the summer. Nevertheless, for the year 2001, assuming continued normal weather and slightly higher world oil prices, EIA does not expect gas wellhead prices to drop below $4 per thousand cubic feet. Increases in production and imports of natural gas needed

to keep pace with the rapidly growing demand for natural gas will result, at least in the short-term, in more expensive supplies for gas because of rising production costs and capacity constraints on the pipelines.

The current short-term supply difficulties are expected to be resolved over the longer term, moving the market back toward an improved demand and supply balance, yielding wellhead prices closer to long-term historical trends. In EIA's *Annual Energy Outlook (AEO2001)* reference case, average natural gas wellhead prices are projected to return to the historical trend by 2004 and gradually increase thereafter, driven by natural gas demand growth, particularly in electric generation, and the natural progression of the discovery process from larger and more profitable fields to smaller, more costly ones. However, available natural gas resources in the United States combined with supplies from foreign sources are believed to be adequate to meet demand increases expected through 2020. In addition, continued improvements in exploration and production technologies to aid in the discovery and development in resources-particularly offshore deepwater and onshore unconventional gas (tight sands, coalbed methane, and gas shales) fields-are expected to help keep wellhead prices from rising rapidly. Wellhead prices for natural gas in the lower 48 States (in 1999 dollars) are projected to reach $3.13 per thousand cubic feet in 2020 (1999 dollars) or $5.03 in nominal dollars.

Domestic consumption is expected to increase at a faster rate than domestic production over the 20-year forecast period, with imports making up the difference. Natural gas consumption is projected to increase from 21.4 trillion cubic feet in 1999 to almost 35 trillion cubic feet by 2020 (a 62 percent increase) and production is projected to increase from 18.8 trillion cubic feet in 1999 to 29.1 trillion cubic feet in 2020 (an increase of 55 percent). Natural gas imports, particularly from Canada, have been rising significantly in recent years, and in percentage terms they are expected to outpace domestic production over the forecast period. Net natural gas imports are projected to grow from 3.4 trillion cubic feet in 1999 to 5.8 trillion cubic feet by 2020, an increase of more than 70 percent. Imports from Canada are projected to remain competitive with U.S. domestic supplies in the outlook because most Canadian gas producing regions are less mature than those in the United States, so they benefit from a better potential for additional low-cost production. Net imports from Canada increase from 3.3 trillion cubic feet in 1999 to 5.5 trillion cubic feet in 2020 at an average annual rate of 2.4 percent.

Expected Alaskan natural gas production in the EIA long-term outlook does not include gas from the North Slope, which primarily is being reinjected to support oil production. Alaskan gas is not expected to be transported to the lower 48 States because the projected prices in the mid- to long- term forecast period are not believed to be high enough to support the required transport system. A sustained U.S./Canada border price of about $4 per thousand cubic feet in 1999 dollars is assumed to be necessary to bring natural gas from the North Slope to the lower 48 States. Production from the North Slope could be substantial and, if transported by pipeline to the lower 48 States, would most likely displace future expected Canadian imports.

Resources in restricted areas (where drilling is presently constrained or prohibited) also are not included in the natural gas resource base underlying the *AEO2001* projections. An estimated 551 trillion cubic feet of the remaining untapped natural gas resource base in the United States underlies Federally-owned lands and approximately 215 trillion cubic feet of that gas is estimated to be unavailable for development due to moratoria and/or restrictions. The Rocky Mountain region has significant resources from unconventional sources that are currently restricted. An estimated 45 percent of the technically recoverable unconventional gas resource base in the Rocky Mountain region, or roughly 108 trillion cubic feet, is off limits due to environmental and access constraints. Increased access to these areas could provide new fields to replace older fields and serve to mitigate future natural price increases. However, the importance of these resources should not be overstated, as many of these technically recoverable resources are expected to be quite costly to develop.

Conclusion

Natural gas spot prices have been sustained at extraordinarily high levels in November after a taste of winter weather arrived in major heating demand areas, and they have surged to even higher levels in December. Several

factors have combined to push spot prices up since early this year, including:

- increased natural gas demand driven by new electric generation capacity and the expanding economy;
- relatively flat domestic gas production for the past several years;
- expectations for normal winter weather that would be colder than in recent years, resulting in greater winter demand for heating;
- below normal gas storage levels; and
- tight supply conditions in alternative fuel markets (e.g., distillate fuel oil).

Mr. Roger Cooper

Executive Vice President, Policy and Planning - American Gas Association, Washington, D.C.

Good morning, Mr. Chairman and members of the committee. I appreciate the opportunity to testify today.

The American Gas Association (AGA) represents 189 local natural gas utilities that serve customers in all 50 states. AGA members deliver natural gas to over 50 million homes and businesses in the U.S.

Local gas utilities are in the business of meeting the needs of our customers. We put together a gas supply portfolio that will enable us to satisfy gas demand even in the most extreme weather conditions. Generally, our planning assumptions are based on the coldest weather of the past 50 to 100 years. We meet demand through a variety of supply sources – domestic and Canadian pipeline supplies, gas stored in underground caverns and peakshaving facilities that use propane air or liquefied natural gas.

As we have testified previously, AGA believes that natural gas will be available this winter to meet demand as contracted. Natural gas will be there to satisfy increasing demand in the future, assuming that Congress and the Administration take positive actions to support the production of natural gas and the development of the necessary transportation and distribution infrastructure to bring that natural gas to consumers.

Natural Gas Market Conditions

We are currently experiencing record high natural gas prices. Last week the price for January delivery of natural gas rose above $8, the highest futures contract price in the 10-year history of the NYMEX. This is a clear indication that the market believes supply is tight in the face of projected higher demand due to possible cold weather.

The EIA forecasts that winter heating bills will be 50% higher than last year and that natural gas prices will not decrease as quickly as they had earlier predicted. This comports with our view that storage may be drawn-down by the end of this winter and that demand to refill that storage while fueling the growing electric generation and industrial load will continue to put pressure on supply and price.

Natural gas utilities will meet the needs of our customers as contracted. That is, we will supply gas to our "firm" residential, commercial and industrial customers when they want it and as much as they want. Those large volume customers that have "interruptible" contracts with us may in fact be interrupted. They understand this; they plan for this possibility; they want this choice; and, they pay less for their gas service because of this contract provision. Interruptions of these customers have been minimal in recent years because of very mild weather and surplus gas supplies. In essence, many have been getting firm service at interruptible prices. Gas available to interruptible customers may be less this year, as always depending on weather and other market conditions.

With respect to price, let me first say that local gas utilities do not profit from higher gas prices. We earn a return on the costs that we incur in providing gas to our customers. Costs such as the cost of installing and maintaining gas mains. That return is regulated by state utility commissions. Wellhead gas price increases, which now are up about 400% relative to last year, are passed through to consumers by local utilities but they are returned to gas producers. Most of this money will be reinvested by the producers in exploration and production activities to ensure long-term gas supplies at competitive prices. In fact, a critical component of the market situation today is the fact

that wellhead prices were very low for extended periods in 1998 and 1999 and producers were forced to limit their drilling operations.

But if gas supplies are getting stronger, why have gas prices skyrocketed so fast and so far? Number one as I just alluded to, gas drilling activity was cut almost in half when prices fell well below $2 at the wellhead in 1998 and 1999. Drilling activity rebounded strongly when prices went back above the $2.00 level, but the increased supply resulting from this drilling will not reach the market by this winter.

Second, demand for gas has been strong. The economy has been robust and industrial gas demand was up by 8% for the first 10 months of the year. Heating demand has also been high in this early winter season due to unusually cold weather. In fact, each of the four weeks prior to December 2 was colder than normal, with the third and fourth weeks of November 36% and 33% colder than normal, respectively. Not only was it cold, but it was cold everywhere. For example, those last two weeks in November were colder than normal in each of the nine US geographic regions. And not only was it cold everywhere, but it was cold early in the season – which exacerbated concerns in a market already questioning storage inventories. Demand for gas from electricity generators has also been strong, in part attributable to very high electricity prices coupled with changing market structures.

Impact on Residential Consumers

Every utility is different but, on average, EIA is projecting increases in residential bills of 40% to 50%, depending on the weather, while wellhead prices have more than quadrupled. Gas distributors insulate customers to some extent by diversifying their supply portfolio and other operating practices. During the winter about 49% of our gas supply comes from mid-term contracts of 1 to 12 months and 29% from long-term contracts greater than 1 year. The daily spot market supplies only about 9% of gas utility winter demand with 8% coming from gas under one month contracts and the remaining 5% coming from supplemental sources such as propane air facilities.

Storage

Storage figures are important market indicators, but they can be overemphasized. Generally, storage accounts for 18% of US gas supply used in the 5-month winter heating season. Local gas utilities have not encountered problems obtaining the supplies they need. The AGA storage report figures show that storage is a little lower than average, but that it will be adequate to meet winter demand. We have been running roughly five to nine percent behind the 5-year average for most of the refill season, but by December 1 the difference increased to 11.7 percent due to very cold weather in all 9 regions.

At the start of the drawdown season (November 10) storage was over 2.7 Trillion cubic feet. Average withdrawals for the past 5 heating seasons have averaged 2.0 Tcf, and peaked at 2.4 Tcf in 1995-1996. In the critical Eastern Consuming Region storage was 92% full on Nov. 10.

Production

Natural gas producers are responding**.** Early in 2000 analysts were projecting a decline in domestic production for this year, but they are now expecting an increase.

Throughout the first half of 1998, the rig count had been in the 600 range, but it dropped to the 300-400 range as wellhead prices fell below $2/Mcf for 9 straight months in 1998-99. Production activity began to pick-up in late 1999 after prices crossed the $2.50/Mcf threshold. By September of this year, the rig count had rebounded to over 810. (43% above a year earlier). Gas well completions may reach 13,500 this year, a 15-year high -- up from 10,500 in 1999.

Despite these Herculean efforts, significant price relief is not expected this winter because of the 12 to 18 month time lag between drilling and delivery.

For this winter, our options are limited. Natural gas utilities have worked hard to provide an early warning to consumers and to promote conservation and other actions to mitigate the impact of higher prices. Utilities and low-income advocates have worked with federal and state officials to maximize federal and state assistance programs.

In summary, the market is temporarily out of balance and wellhead prices will decline as supply catches up, but they are unlikely to retreat to the pre-spike level. Over the long term, the natural gas resource base is not the issue; but the ability to produce, gather, and deliver natural gas is.

A Long Term Energy Strategy

AGA strongly believes that now is the right time to begin to focus on longer-term energy issues. The need for a national energy policy goes beyond natural gas issues and calls for a balanced energy strategy that includes all sources of energy.

Ample, reliable energy supply at affordable prices is key to providing economic and national security for Americans. The American Gas Association recognizes that, while the United States has tremendous energy resources, America's current energy supply and infrastructure will not sustain our growing economy and we need to act now to meet our country's energy needs for the 21st Century.

In order to continue to meet the energy needs of our unprecedented growing economy and provide affordable energy for consumers, America will need to utilize all domestic fuels and energy sources efficiently. This is also the right approach for American citizens who will benefit from more reliable and affordable energy from domestic energy sources, cleaner air, and a stronger economy.

AGA is committed to working with Congress to enact a bipartisan, consensus, market-based national energy strategy that will ensure the future security, comfort, and economic well being of our nation's citizens by meeting their energy needs, without sacrificing the quality of our environment. AGA will work with consumers, policy makers, and its partners in the energy industry to accomplish this goal.

There are three objectives that national energy strategy legislation should accomplish:

First and foremost, it should meet the energy needs of consumers and our growing economy. It should ensure reliable and affordable energy supply for all American families and businesses. This can be accomplished by promoting a balanced energy portfolio that uses all fuels in the most efficient manner possible; by encouraging necessary long-term energy supply and infrastructure investments; and by seeking market-based solutions that reduce regulatory uncertainty.

Second, a national energy strategy should be environmentally sound. It should lead to increased use of cleaner and more efficient energy technologies and enhance the development of renewable and cleaner energy sources. The legislation should increase energy efficiency and energy conservation through fair and balanced incentives and standards. And it should ensure that energy and environmental policies are integrated, complementary and support long-term goals.

Third, a national energy strategy should seek to enhance our national security by reducing our dependence on foreign oil, increasing our domestic energy supplies and reducing overall energy consumption.

The American Gas Association is working with energy and consumer groups to develop a consensus on the specific components of national energy policy legislation. We hope to work with the members of this committee and other interested members of Congress to enact energy policy legislation in 2001.

Thank you.

Ms. Deborah Schachter

Director, Governor's Office of Energy and Community Services, Concord, N.H.

On behalf of the National Association of State Energy Officials

My name is Deborah Schachter, and I am the Director of the New Hampshire Governor's Office of Energy and Community Services. I am testifying today on behalf of the National Association of State Energy Officials (NASEO). NASEO represents the energy offices in virtually all the states, territories and the District of Columbia. These energy offices serve as the Governors' energy policy advisors. In addition, NASEO members generally support a balanced state and national energy policy, and implement energy-related programs and initiatives at the state level.

We applaud the Committee for calling this hearing to discuss natural gas price and supply issues. The country is in an energy crisis at this time. We need to respond assertively, but in so doing need to take care that any policy judgments or political actions recognize the necessity for a balanced approach. This means a combination of both short and long term solutions, both supply-side and demand-side strategies.

Further, we cannot speak of natural gas markets in isolation, for this market is ever more closely linked to both heating oil and electricity markets. Certainly rising electricity rates for many customers in both regulated and newly deregulated markets based on fuel cost adjustments, the growing prevalence of gas-fired electric generation, and the impact of interruptible gas customers on heating oil prices are obvious among such linkages.

A balanced approach to our current energy price and supply situation is needed, and there are a number of aspects of the challenge that merit our attention. A balanced approach should include:

- promoting environmentally sound supply-side options, such as clean, diverse generation sources;
- encouraging increased infrastructure capacity, including increased development of gas and oil pipelines as appropriate;
- targeted tax incentives for both supply- and demand-side initiatives, including energy efficiency credits along the lines of those proposed during this past year;
- strategies for addressing problems created by "just-in-time" inventories, including promotion of summer-fill for heating oil and inventory build-up for natural gas;
- a partnership between state and federal governments to increase funding for cost-effective energy efficiency investments;
- streamlined siting requirements (where appropriate);
- increased drilling in environmentally-acceptable locations; and
- increased funding for the Low Income Home Energy Assistance Program.

There is no singular solution to our present energy problems. They will not be solved overnight.

With this in mind, as we attend to long term energy policy strategies, I must stress the immediate and dire need for increased Low Income Home Energy Assistance Program (LIHEAP) appropriations for the current program year, from $1.1 billion to a minimum of $1.65 billion, as well as release of the remaining (roughly $155 million) LIHEAP contingency funds. Skyrocketing prices for natural gas, combined with rising heating oil, kerosene, and propane costs, and attendant electricity price increases for many households, leave the most vulnerable households at serious risk. Simply put, my state is facing the need within days to cease taking LIHEAP applications due to lack of funds, leaving thousands of vulnerable low income families, many with young children, elderly or disabled members,

without the means to remain safe and warm this winter.

In NH, for example, the most recent HHS LIHEAP Income Eligibility Estimates (FY 1998) project that 114,000 households are income eligible for LIHEAP at the federal maximum standard. Yet, faced with the worst energy crisis in 20 years, we project an ability to serve less than 12% of the eligible population at current funding levels. With many households still in line to apply, increased prices and rising demand for assistance have put my state in the position of being within days of shutting down the program for all but emergencies, due to having completely obligated our available LIHEAP funds. This is truly a crisis. As of yesterday, the average household in New Hampshire heating with oil can expect to pay $1.59 per gallon, a 47% increase over last year at the same time. When increased usage over last year's warmer-than-average winter weather is factored in, the average household in my state using oil will spend 67% more to heat this year than last winter.

Ensuring increased funding for this program, one which enjoys strong bipartisan support, is the most urgent and necessary short-term response we can have as a nation to the energy situation that confronts us. Prior to the election appropriations negotiators had resolved to increase the Low-Income Home Energy Assistance Program (LIHEAP) from $1.1 billion to $1.4 billion in FY'2001. With the continuing appropriations uncertainty, this increase is in question. In fact, with natural gas and other energy prices soaring the necessary figure is actually much higher than $1.4 billion. A broad bi-partisan group has supported higher funding levels.

You have seen the NYMEX price of gas increase to over $9/MCF, up from slightly over $2/MCF in the recent past. The prices in California and at the British Columbia-Washington State border are unbelievable. The Congress should increase LIHEAP to equal the FY'85 funding levels of $2.1 billion, which would not even account for inflation since that time. This program is critical to help the poor, elderly and disabled stay in their homes. It is a critical program for cold weather states like my own, but also for warm states, where air conditioning also saves lives. We urge Congress to act this week to increase LIHEAP funding.

"JUST-IN-TIME" INVENTORIES

Heating oil, other distillates, and natural gas inventories are at extremely low levels. Certainly, with oil prices just two seasons ago at $11/barrel and gas at $2/MCF, and attendant decreases in natural gas drilling, supplies have declined. It is widely recognized that such low inventories make us more reliant on seamless delivery infrastructure, and make us more vulnerable to potential supply disruptions and price spikes if weather events, surging demand, or other eventualities threaten supply sufficiency.

Just last week, at a Northeast Winter Fuels Emergency Workshop and Simulation Exercise in Manchester, New Hampshire sponsored by the Coalition of Northeastern Governors (CONEG) along with my office, NASEO, and the Department of Energy, a representative of the United States Coast Guard underscored his concern about the risks of extremely low inventories and reliance on uninterrupted supply chains, given the limited and reduced number of ice cutters and other assets available to respond to weather emergencies. There is a need to revisit funding for the Coast Guard to ensure adequate means to perform this vital function.

Reduced inventories are a normal economic response to high carrying charges and the risks to those holding high-priced stocks in markets where futures prices may be much lower. On the other hand, over-tight supplies result in potentially disruptive and even dangerous situations for businesses and consumers. These low inventories also tend to have a telescoping effect on price as we get close to supply limits. California and the Pacific Northwest are experiencing that now in natural gas markets; the Northeast saw this last winter in oil price spikes in February, and we may be headed again in that direction this season.

Somehow we must develop incentives, either financial or otherwise, to encourage inventory build-up of both heating oil and natural gas, as well as other distillate products. A number of years ago, some in Congress suggested

minimum inventory levels. While not endorsing such a plan today, we recognize that minimums may need to be explored if incentive approaches are not sufficient. For example, the Division of Energy Resources in Massachusetts has designed an innovative incentive program to increase inventories of heating oil in that state. This small $5 million program in Massachusetts appears to have added to very low inventory figures. We would like to work with the Committee to examine the full range of options for enhancing inventories.

As noted, in the last few years with increased use of natural gas for electric generation and increased use of interruptible contracts we are at greater risk, especially at times of emergency or near-emergency situations. The states are endeavoring to respond. We note, for example, that New York has moved to require interruptible gas customers to have 7-10 days of alternative fuel supplies available either in on-site storage or via a contractual relationship with a supplier, in order to better ensure dependable supply. Other states are reviewing their interruptible tariffs and enforcement policies. We applaud the decision by the National Association of Regulatory Utility Commissioners and the Interstate Oil and Gas Compact Commission to join forces to review existing pipeline certification procedures and to expedite such actions. We look forward to working with them in this important effort. Rehabilitation of existing infrastructure and the dramatic increases in new construction required to meet demand calls for increased coordination and cooperation, including federal cooperation. Rational pipeline safety legislation should also be passed as soon as possible.

ELECTRIC RELIABILITY AND DEMAND RESPONSIVENESS

Obviously, the electricity reliability situation is connected to our natural gas problems. The bill the Senate passed last year on electricity reliability is a step in the right direction, and should be passed by Congress. A more comprehensive approach should also be assessed, which requires infrastructure upgrades and federal-state cooperation. The Energy Information Administration should be called upon to look comprehensively at the potential effect of newly sited and soon-to-be-sited electric power production with oil back-up capacity on the heating oil marketplace. Further, while we have long maintained a one-day-in-ten-year contingency approach to ensuring electric reliability, it is not clear that we have any similar process for the more dispersed natural gas network, despite increasing relevance of this market to electricity production. We need to explore this more fully.

Demand responsiveness is also an important part of any long-term energy strategy. We cannot ignore supply-side approaches; but neither can we ignore the need to empower customers and markets to lower costs and enhance reliability with demand-side solutions. In the context of electricity and gas restructuring, funding for energy efficiency programs has been cut. A state and federal partnership could produce real results in funding cost-effective measures to seize energy efficiency opportunities which would otherwise be lost due to market barriers.

The Independent System Operator (ISO) response to electricity problems has traditionally been focused on load curtailment - shutting large customers off to achieve quick demand reductions - rather than more predictable and ultimately less intrusive demand responsiveness mechanisms and energy efficiency measures, which could produce reduced usage without lifestyle changes. We need to examine these options together and quickly. A series of regional energy summits with interested parties might afford a focused, non-partisan approach to tackling these issues.

Two federal programs which foster essential reliability and demand-side capabilities at the state level are the Low-Income Weatherization Assistance Program (WAP) and the State Energy Program (SEP). WAP received $153 million in federal funding in FY'2001, an increase of $18 million over FY'2000 levels, but still far below the $226 million appropriated in FY'95. Weatherization was slashed in FY'95. This program helps the poor, disabled and elderly by improving their housing stock and reducing their energy bills through energy conservation measures. A recent Oak Ridge National Laboratory study showed that the average energy savings after these measures were installed totaled 23%. This is the type of long-term program that we as a nation and this Congress should support. Weatherization also receives enormous leveraging of state, private and local funds.

The State Energy Program (SEP) received $38 million in federal funding in FY'2001, down from the $53 million

level in FY'95. This program allows the energy offices to match private, state and local funding to conduct important energy projects, which helps all sectors of the economy become more efficient. Matching funds total as much as 20:1. Again, we urge the Congress to increase funding for this program.

As we explore reliability options and energy policy strategies, we must also be mindful of environmental requirements. Cleaner-burning gas produces positive environmental results, but is not a panacea. At NASEO we have begun the process of working with the state environmental commissioners and air officials, in conjunction with our public service commissions, to begin to look at our energy and environmental issues together, rather than independently. There are a number of models in different states that we could utilize to meet our energy and environmental challenges.

Public education in the energy area has long received insufficient attention. We need to expand efforts in this area to encourage changes in consumer behavior and to assist customers in all sectors to recognize that energy has a dramatic effect on our everyday lives all the time, not just when gas is curtailed or when the lights go out.

EMERGENCY PREPAREDNESS

In periods of low natural gas and oil prices we as a nation tend to forget about energy emergency preparedness. This is a mistake. In 1995, over our objections, the Interior Appropriations and Energy and Water Development Appropriations Subcommittees, in both the Senate and House, with the tacit support of the Administration, virtually eliminated funding for non-nuclear energy emergency preparedness at the Department of Energy. While the Energy Information Administration provides critical data, and they made huge strides under the former Administrator Jay Hakes, more is needed to be ready and respond to an emergency.

There are very capable career employees at DOE, who know how to work with the states, industry, etc., in responding to an emergency. The re-creation of the energy emergency office within the Office of Policy is a very positive step. Supplemental appropriations are necessary to permit this energy emergency office to operate in a continuing and effective manner.

As noted, on December 4-5, state and federal energy representatives, public service commission staff, industry representatives, and others met in Manchester, New Hampshire for a regional energy emergency simulation and preparedness exercise. Another exercise was held earlier this year in Nevada. We had presentations by DOE, EIA, FEMA, the Small Business Administration, the United States Coast Guard, the U.S. Maritime Administration, as well as NASEO and individual states, followed by an emergency simulation on day two. We also reviewed state emergency statutes, and appropriate response mechanisms, such as set-aside authority (the ability in some states for a Governor to set-aside up to 5% of supplies within a state for high priority uses during an emergency). In an emergency, the relationships forged during these types of meetings are critical to responding quickly and appropriately. Interstate coordination and state-federal coordination also needs to be fostered. These exercises are absolutely necessary and should be supported financially at the federal level so that we can be prepared. This is not just a state problem, nor just a federal problem.

EPCA REAUTHORIZATION

Elements of a national energy policy are in place. The Strategic Petroleum Reserve is a critical response mechanism, and the incentive structured in the EPCA reauthorization bill to permit purchases for the Strategic Petroleum Reserve when prices drop below $15/barrel is a good idea. NASEO always supported a Reserve of up to 1 billion barrels. In periods of low prices we should still aspire to increase the fill for the Reserve.

Chairman Murkowski and Senator Bingaman are to be congratulated for joining with the Administration in finally passing a reauthorization of the Energy Policy and Conservation Act (EPCA). In addition to reauthorizing the

Strategic Petroleum Reserve, it formally established a Regional Petroleum Product Reserve. We are hopeful that this Regional Reserve will help us deal with this winter and coming winters.

The recently passed EPCA bill also authorized a new "summer-fill" encouragement program. We hope that we can work with this Committee and the Appropriations Committees to fund this effort. In most years, it would be advantageous for businesses and consumers to purchase heating oil in the less expensive summer months. We need to encourage that.

In addition, the EPCA bill also provided some important revisions to the Low-Income Weatherization Assistance Program, and repealed the ill-advised state match requirement, which had been put into place by the Interior Appropriations Bill.

CONCLUSION

We look forward very much to working with the Committee as you continue to tackle our nation's energy challenges. We agree with you that we as a nation cannot just focus on energy this week or this month, in this gas crisis or that oil price spike. Instead, we need to agree to a sustained commitment to addressing our energy needs and problems with a combination of supply and demand-side solutions, strong energy emergency preparedness, and increased funding for a variety of measures of the type I have discussed.

Mr. John Sharp

Vice President and Counsel, Natural Gas Supply Association, Washington, D.C.

Thank you, Mr. Chairman, for this opportunity to discuss the important role that natural gas can play in agriculture.

Mr. Chairman, with your permission, I would like to submit the pamphlet entitled "Building America With Natural Gas" for the record.

Mr. Chairman, may it please the Committee, I represent the Natural Gas Supply Association. NGSA is an organization of natural gas producers that encourages expanded use of natural gas and a regulatory climate that fosters competitive markets.

Mr. Chairman, my members did not send me here today with any secret words that will make your constituents content about the natural gas prices they will be paying this winter. Furthermore, we don't believe there are any short-term solutions or answers to change the marketplace conditions that exist today. Most of the solutions are long-term, and I'll discuss one of the more significant ones later in my testimony.

As the EIA witness just stated, the supply of natural gas is vast, and the resource base – as many studies have indicated – shows a strong long-term supply picture. And, given this vast resource base, producers and other segments of the industry are committed to meeting their contractual obligations.

What is happening in the natural gas marketplace today is a combination of forces that, in the past, have not usually existed simultaneously. Clearly, these forces underlie current market conditions. They include – but are not limited to – the following:

- First, perceptions by some of a supply shortage.
- Second, perceptions by some of the adequacy of gas storage.
- Third, the high price of substitutes for natural gas, like fuel oil and propane.
- Fourth, recent predictions of colder weather this winter,
- And Fifth, a robust demand.

The combination of these real and perceived conditions is resulting in a tight natural gas market.

At the same time as these forces are in play, U.S. producing companies are facing challenges of their own, such as manpower shortages, and the lag time it takes to get new production into the market. We are addressing and overcoming these formidable hurdles. We are working closely with other segments of the industry to ensure that gas gets to market.

We are also striving to meet new market demands. Producers are drilling at unprecedented levels, both onshore and offshore. We are tapping resources in frontier areas – including Alaska – that, due to hostile climate and terrain, require us to carefully balance costs, risks, and potential in an unpredictable energy market. We are utilizing all available field equipment. And we are evaluating older fields with an eye toward increasing their output.

These activities will bring new supply to the market. But most analysts believe it will not come in time to effect market conditions this winter. The demand for natural gas is simply exceeding supply. That's the short-term outlook.

The long-term outlook will be significantly affected by public policies that we believe will have to change if the market is to grow. If producers are to bring significantly increased supplies of natural gas to market at prices competitive with other fuels, we will need access to resources under government lands – resources where production is currently prohibited by a variety of federal moratoria and regulatory restrictions.

America's richest natural gas resources – the resources we can produce most cost-effectively – lie under government lands. Our industry can produce this gas in ways that are environmentally sensitive, and we are committed to that goal. Advances in our industry have dramatically reduced the footprint of gas production on the surface. And dozens of environmentally sensitive technologies are being employed by the industry.

Thus, it does not make economic or environmental sense to deny producers access to government lands. To do so is likely to lead to two consequences – fuel-switching, to the extent that it is possible, and higher costs to future generations. I do not think that either of those choices is a good alternative. Clearly, we need new policies that give us better options.

Today's high price energy market can serve as a wake-up call, if we choose to hear that call. If we choose to understand it, today's high prices can spur development of a long-term, bi-partisan, balanced national energy policy. Clearly, a competitive market with many buyers and sellers is the best protection for consumers. The members of the Natural Gas Supply Association stand ready to work with you and with Senator Bingaman on a national energy plan that includes increased access to natural gas resources. Given the passage of such an initiative, I believe we can look forward to an energy marketplace that supports national economic growth long into the future.